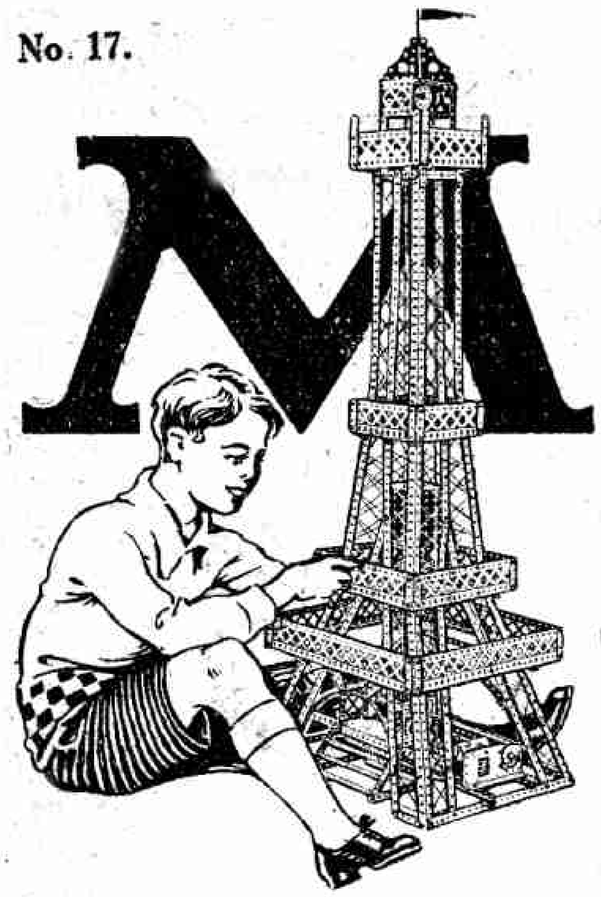
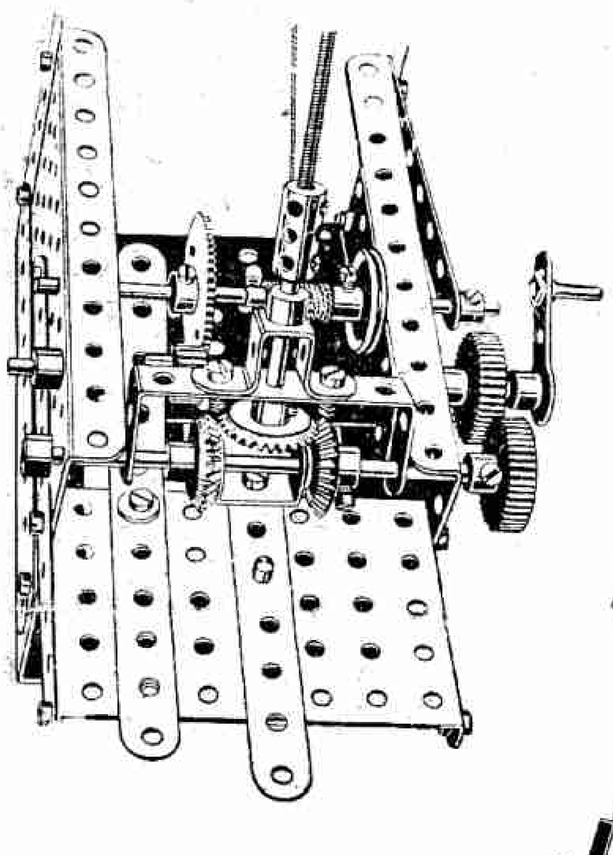
No. 17. MARCH-APRIL, 1921.

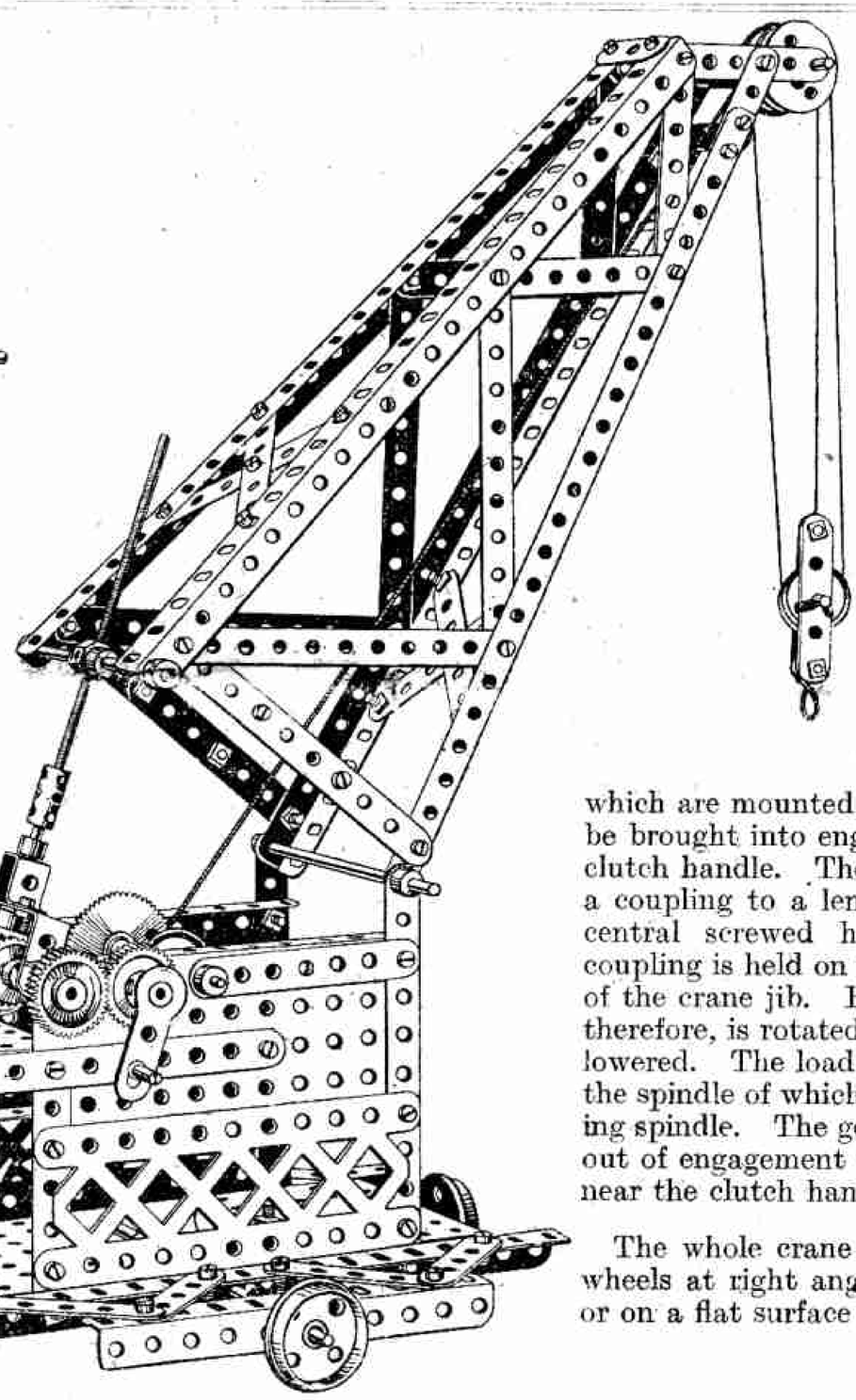


MECCANO MAGAZINE

PRICE 1d

TO HELP MECCANO BOYS TO HAVE MORE FUN THAN OTHER BOYS





A New Meccano Crane.

This splendid model was awarded a valuable prize in one of our £200 *Prize Competitions.*

This is a very fine model and in order to assist our readers to construct it we have included a sectional drawing. In due course this model will appear in a new edition of the Meccano Manual where it will be illustrated and very fully described.

The raising or lowering of the jib is obtained by pivoting the jib at its lower end on a short axle rod, the movement about the pivot being obtained by turning the handle at the side which drives through the two large gear wheels the clutch rod on which are mounted two bevel pinions. Each of these pinions can be brought into engagement with an upper pinion by moving the clutch handle. The axle rod of the upper pinion is connected by a coupling to a length of screwed rod which passes through the central screwed hole in an octagon coupling. The octagon coupling is held on two short lengths of rod in the other lower end of the crane jib. By moving the clutch handle the upper pinion, therefore, is rotated in one or other direction and the jib raised or lowered. The load is raised or lowered from the same handle, on the spindle of which is a pinion engaging a gear wheel on the winding spindle. The gear wheel on this spindle may be moved into or out of engagement with the pinion by operating the other handle near the clutch handle.

The whole crane is mounted on a platform supported on four wheels at right angles to each other, and they may run on rails or on a flat surface to turn the crane round.

Editorial.

£250 Competition.

Let me remind all Meccano boys that the closing date for the big best Model Competition is April 15th. Entries are pouring in and the competition is already an assured success. I know that nearly every boy who plays with Meccano invents some new model or movement which does not appear in the Meccano manuals, and we want all these models and improvements so that we may make them known to other Meccano boys. The prizes in this big contest are both generous and numerous.

New Meccano Parts for Old.

In our No. 15 issue I announced that if obsolete, damaged, or rusty parts were returned to Meccano Limited, entirely new and up-to-date parts would be supplied for them on payment of half list prices. Already large numbers of my readers have taken advantage of this concession, and I hope that all who possess any deteriorated or damaged parts will have their outfits freshened up in this way. I find it necessary, however, to make it clear that Meccano parts only will be dealt with, and that no parts will be exchanged which have not been manufactured by Meccano Limited.

Our Suggestion Column.

This new feature of the *M.M.* is proving wonderfully successful, and I am quite sure that both the Meccano boys, and the Meccano hobby, will benefit greatly from it. I advise all my readers to read this column very carefully, and to make use of it when they experience difficulty in building any model which they have invented, and consider that a new accessory part would help them.

Increasing Editorial Correspondence.

My mail bag grows bigger and bigger every week, and nothing pleases me better than to read through the interesting letters which Meccano boys send to me. They come from every part of the world, and I am especially glad to note the increasing number which I get from Meccano enthusiasts in our colonies. The one which I am printing in another column is quite typical, and I am sure you will all be as interested in reading it as I have been.

New Models Coming.

Next autumn will see the addition of a goodly number of new and particularly attractive models to the Meccano system. Much ingenuity and thought have been spent on them, and they will undoubtedly give great pleasure and add much to the enjoyment of all Meccano boys. They will be illustrated in the new edition of the full Meccano Manual of Instructions which is now in preparation.

New Hornby Clockwork Trains.

This successful clockwork train system is being very rapidly developed. Bigger engines, passenger coaches, new trucks, larger radius lines, crossings, switches, etc., are all designed and decided upon, and are already in the hands of skilled men in the Meccano works. Nothing could exceed the charming finish and beauty of these goods, and there is no doubt that they will create a sensation in the world of toys next winter.

The Editor

The New Meccano Catalogue.

This beautiful new catalogue should be in the hands of every Meccano boy.

Besides illustrating and describing each outfit and explaining the simplicity and beauty of the Meccano system, it gives full particulars of the new Electrical Accessory Outfits, Meccano Clockwork and Electric Motors, the Hornby Clockwork Train System which is making such a deep impression throughout the country: the Tin Printed Clockwork Trains and Vertical Steam Engines. It also contains two full pages of illustrations of Prize-winning Models in the Big Meccano Competitions, and a fully illustrated list of the entire range of Meccano parts, including the new and valuable ones which have been recently added.

The demand for "Meccano Products" following the announcement in our last issue has been very heavy indeed, but there are still thousands of Magazine readers who have not taken advantage of this splendid offer.

We wish every reader of the *Meccano Magazine* to possess one of these beautiful booklets. A copy will be sent FREE on receipt of your postcard. Write to-day.

Change of Address.

Subscribers should immediately notify the Editor of any change of address. Send a postcard *giving the old and new address*, so that records may be kept up to date.

Suggestions by Meccano Boys.

In our last issue we reserved a special column for dealing with suggestions for new models, new parts and new features, intended to improve the Meccano system and add to its attractiveness. We dealt with a number of suggestions already received from Meccano boys and added that any further suggestions sent in by Meccano users would be very welcome and would be most carefully considered.

Since the appearance of our last issue we have received a large amount of correspondence from Meccano users, many of whom have made most interesting and useful suggestions. We are dealing with a large number of these in this column, and we have no doubt that our notes will be found of great interest to every Meccano user. Many other correspondents have been replied to direct as we have not sufficient space to deal with them all here. We are always very pleased indeed to hear from any Meccano boy who has an idea which he considers will be useful to the Meccano system.

W.W., Bellahouston, suggests that we introduce a Meccano part to correspond with two angle brackets bolted together. We have already added to our list of parts a ½″ reversed bracket which will be more rigid in its application to the construction of models than two angle brackets bolted together.

N.H., Shepherds Well, sends us a suggestion for an eccentric wheel and connection for use with a model of a steam engine. This part would be very limited in its application at present, but later on we hope to introduce one or two other parts in connection with steam engines when we shall take the eccentric into consideration.

A.V.L., Forest Gate, London. We shall shortly issue an improved system of lines for the Hornby clockwork trains, which may also be used in connection with Meccano model wagons, etc. They will be made so that a third rail may be fastened to the sleepers for running electrical models.

Rev. W.S.K., M.A., Hull. Your suggestion to make the Hornby trains to run on the free wheel principle would be impracticable on the present design. The only solution to this would be to introduce a pull along train without clockwork, which we may do later.

H.E.W., Tunbridge Wells. We are not clear with regard to your suggestion for a bent strip with eleven holes. If it is for a 5½″ strip to be bent at right angles, there should be no difficulty in your doing this, but if it is intended to be a flat angle piece for making a rigid connection with two strips at right angles, we would say that we have in contemplation the introduction of a part similar to this but with fewer holes.

I.T., Coddington, Oxford. We announced in the last issue of the M.M. a new type of pawl, which may be used in conjunction with the one inch gear wheel already in our list of parts, and which will effect the purpose of forming a ratchet and pawl.

H.A., Ilford. Your suggestion for a fly wheel of about 3″ or 4″ diameter is one which we have had under consideration, and we propose introducing one at the earliest opportunity.

A.E.B., Redditch. An adjustable handle to obtain greater speed may be made by attaching a coupling to the end of a rod, and inserting, say, a 3½″ rod at right angles. To the other end of the 3½″ rod should be attached another coupling with a shorter rod for the handle. The handle may be made shorter or longer by sliding the 3½″ rod up or down the first coupling.

W.T.T., Southampton. We illustrate in our Electrical Manual how to make a radiator with Meccano parts and Electrical parts contained in the Electrical Accessory Outfit.

W.D., Mansfield. Most of your suggestions are very practical having in mind the interchangeability of the parts. We have, however, already included in our list a number of parts which are very similar to those you suggest, such as curved rack segment, triangular plate but without collar and set screw, winding drum formed by butting two bush wheels against a wood roller, and very shortly we shall issue a right angle piece with a collar and set screw at the angle. The other parts you illustrate will have consideration later.

R.T., Lincoln. The part which you include with your letter is called a Trunnion, and we already have a similar piece in process of manufacture.

L. Perry, Maidstone. Your suggestion to place a rubber ring around a pulley wheel when used for a car or similar purpose is a good one, but we have not thought fit to include it in our system as suitable rings can easily be obtained from any dealer in rubber goods.

W.D., Dudley. We note your suggestion of a grooved rod with a threaded set pin to permit of a gear or other wheel being moved along a rod, but we do not think this would be practical with our present rods on account of the smallness of the diameter.

E.I.N., Chester-le-Street. We shall very shortly issue a 4½″ perforated strip, but so far as the 4″ and 6″ strips are concerned, we do not think these sizes would be as useful as strips with an odd number of holes, giving a centre hole. We already provide 2½″, 3½″, 5½″ and 12½″ braced girders and up to the present these appear to have met all requirements.

D.S.H., Sheffield. We cannot see the purpose of your suggestion for a T coupling. Our present coupling permits of a rod being secured at each end and one passed through the centre hole if required.

C.F., Duckerfield. We are interested in the photograph of a rope drive, and also the sketch for a combination of pulleys which you have sent us. We are not sure whether there would be much advantage in introducing such a part in the Meccano list, as our present pulleys may be used for the same purpose. For example, two pulleys could be secured on the rods or shaft with the flat sides of the pulleys butted together and the pummels outside.

N.P.M., Hammersmith. We do not consider that strips, angle girders or braced girders of 8″ length would be a convenient size. If an 8″ is necessary to complete your model, you could overlap a 5½″ and 3½″ strip which would give you the desired length. We have not had a call for rods longer than our present 11½″. We are sorry to hear of your infirmities, and send you our sincerest sympathy.

Life Story of Meccano.

By Frank Hornby.

(Continued.)

I think one of the most fascinating departments in our entire works, both to myself and to all Meccano boys, is the room where we build our models. Every day we have boys who come to make a tour of our works, and although they are very interested in seeing the various parts made and finished, and the many wonderful machines in operation, it is always the model room which they like to linger in longest.

It is a big part of our business to provide models for various dealers throughout the country to put into their windows to demonstrate the wonderful possibilities of Meccano. Very many of these models have electric motors fitted into them so that they may form a complete working demonstration, and at certain times of the year we have a big staff of model makers who are busily engaged in erecting towers, bridges, cranes, etc., carefully adjusting the electrical fittings and testing them thoroughly before they are despatched to their destinations. Many of these beautiful models are fitted up with electric lights, and when the parts are new and bright, and the models working perfectly, it is certainly a very beautiful sight. I have often thought that it would be a good plan, if it could be arranged, to have expert Meccano boys come along to our model room to help to build these models. I know the joy it would give to them, and that they would be most careful and thorough. Some day, perhaps, this thought may bear fruit, and if it ever becomes possible I know that there would be no dearth of keen volunteers

In the same room we have expert model builders who are designing entirely new models, and this is a side of the big Meccano business which we pay very careful and serious attention to. We not only design new models here, but we improve and perfect the many excellent models which are sent in to us in connection with our annual £250 Best Model Competition. There is always an abundance of new material for us to work upon, and this department is never idle. As all my readers well know, new Meccano engineering parts are being added to the system almost every day, and each new part makes possible new models, new movements, and many important improvements in older models. This is all experimental work and necessarily slow, but it provides us with a steady stream of new models for the Meccano Manuals of Instruction and an abundance of matter for the Meccano Magazine. In the future you boys will see much more of the activities of this department, and it gives me a good deal of pleasure to know that its work will be the means of setting busy hands and brains to work in every corner of the world.

In the earliest days of Meccano, and in fact for many years after it was first put on the market, I personally designed, built and photographed every Meccano model which appeared in the Meccano Manual of Instructions, and even now all this work of model designing is done under my close supervision, as I do not wish any models to be associated with our system which are not designed and built on sound and correct engineering principles. I attach the utmost importance to the value of imparting correct engineering knowledge to boys, and I devote a good deal of my time to the perfecting of models and to seeing that they are properly illustrated and correctly and lucidly described in our Manuals.

A specially laid out section of this Department is devoted to experiments in connection with the development of the electrical side of Meccano. Electricity is going to play a very big part in the future of Meccano, and you boys will shortly have an opportunity of seeing what excellent work has been done by our electrical staff. We already issue one electrical accessory outfit which enables a boy to make a series of very interesting electrical experiments, and this outfit will be added to and developed just in the same way as Meccano was added to and developed in its early days.

Electricity is a wonderful force, and I feel that it is the duty of every boy in this country to get acquainted, as far as he can, with the nature of this force, the various ways in which it operates, and its tremendous influence on modern life. Apart from the undoubted value of this knowledge to all boys, I know of no more delightful and fascinating study. I think I am correct in saying that most mechanical or engineering movements known, are, or can be, operated by electricity, and all Meccano models, which are vivid representations of those movements, can, in a simple fashion, without any complications, be similarly operated.

In the greatest and most important inventions of this age electricity is the only force employed, and in Meccano and electricity combined we have a means of reproducing in a simple and satisfactory way a great majority of these marvellous feats. Electricity to most boys means mystery, intricacy, and difficulty; but this is quite a misconception. There are a few important elementary things to be learned and grasped at the first, and this can be done with practically no study, and after these first principles are understood any boy with an average intelligence, and most certainly every keen Meccano boy, can ensure for himself many very happy and enjoyable hours in a delightful world of electrical wonders.

(To be continued.)

Result of Meccano Essay Competition.

"How I would run the *Meccano Magazine* if I were the Editor."

This has been a splendid competition, the Meccano boys vying with each other in suggesting ways of making the *M.M.* more and more attractive. There have been many hundreds of entries, and the task of selecting the best was not easy. Many boys have written in to say that the *Magazine* could not possibly be run on better lines than it is at present. We need hardly say that we do not agree with this, but shall go on adding more and more improvements as time goes by. A noticeable feature of the competition has been the keenness of boys for more articles dealing with Mechanics and Electricity, and we shall certainly keep this in mind. Other boys have suggested fiction stories, Poetical competitions, a Puzzles Jokes and Games column, a Girls' corner, articles on the Lives of Engineers, etc., etc., and we shall give all these suggestions very careful consideration.

With rare exceptions all competitors have said that the *M.M.* should appear oftener, and should consist of more pages. We quite agree with this, but there are many difficulties in the way just now which it would be rather difficult to explain here. As soon as we can see our way clear, however, we intend to issue the *M.M.* oftener, and possibly to make it bigger, as we feel that it is only by doing this that we can do proper justice to the inexhaustible Meccano topics.

The First Prize, an Inventor's "B" Outfit, has been awarded to Master A. B. Miskin, 37, Worley Road, St. Albans, age 17, who has written a very careful and thoughtful essay.

Other boys who sent in excellent essays are :—

Master Tom Griffiths, Rose Cottage, Ynysforgan, Morriston, near Swansea, age 16.

Master L. Brown, Chase Cliffe, Whatstand Well, near Matlock, age 14.

Master H. G. Knight, Deverill House, Marlborough, Wilts., age 14.

Besides submitting thoughtful essays. each of these boys has shown constructive and literary ability in his work. We have posted an Inventor's "A" Outfit to each of these boys.

Winning Essay.

The aim of the *Meccano Magazine* is to help Meccano boys to have more fun than other boys and, as editor, I should always bear this in mind when selecting material for publication.

The subject matter for this paper may roughly be divided into four classes., The first division contains all general information, the Editorial, price list and the "Mail Bag." The next two classes represent the Competitions and Guild Notes respectively, while the last and most important one includes articles and hints for model-builders.

Every magazine must have its editorial column and I would not have mine be an exception to this rule. General notices, prices of outfits, concessions—these are essential, but they must not crowd out the Correspondence. In selecting letters and replies for publication I should include rather less poetry and substitute more letters containing hints and reports of progress. It is true that the engineer or higher mathematician is a poet, but one can be so without writing verse. Above all, I would print more letters from other parts of the world and thus enable the reader to appreciate the true universality of Meccano.

It is said that competition is the soul of industry and so I would leave the arrangements in this respect practically the same as they are at present. They leave little to be desired. The prizes would be almost entirely Meccano sets or parts as then the keen would become keener and those out to collect "pots" or cash would not be so ready to enter. However I would particularly encourage writers of short essays (or articles) on original ways of using the standard parts—especially the newest ones—besides suggestions for improving models described in the Manual.

I should cut down the amount of Guild Notes in the Magazine, or, for preference, increase the size of the whole. The present tendency is to devote too much space to Guild matters and not enough to Meccano itself. It is a pity, for while the Guild is an excellent institution Meccano must come first and something has got to be shortened.

As editor of the *Meccano Magazine* I would publish those articles which would be most helpful and interesting to the actual builders of Meccano models, taking care to include descriptions of new models, spare parts and ways of using them. There would also have to be something lighter such as a humorous or other article, e.g., The Life Story of Meccano. Again, among the articles intended to help model makers, there would be those on elementary mechanics and science generally. These would give boys more insight into "Meccano," and later civil engineering.

In conclusion I must say that I would help the boys to build up character and directness of thought, so that they may be able to crystallize their ideas. They see a vision of a possible model. Help them by practical notes to see it, first as a whole, then by your teaching (of course unconscious to them), help them to analyse their ideas. Then they may be able to build up that model, bit by bit, from their imagination.

For only thus are engineers made, and all will have a better chance of solving the problems of life itself.

How to get the Meccano Magazine regularly.

The Meccano Magazine is now sold by most of the regular Meccano dealers, but in order to prevent disappointment you should place an order with your dealer for a copy of each issue to be reserved for you. The price of each issue is 1d. If you experience difficulty we will mail you a copy regularly on receipt of 6d. for the next six issues, or 1/- for the next twelve.

The Meccano Guild

Member's Badge

A Fellowship of Meccano Boys

Leader's Badge

The objects of the Meccano Guild are:

(a) To make every boy's life brighter and happier.

(b) To foster clean-mindedness, truthfulness, ambition, and initiative in boys.

(c) To encourage boys in the pursuit of their studies and hobbies, and especially in the development of their knowledge of mechanical and engineering principles.

We are again able to report substantial progress of the Meccano Guild. Applications for membership are coming in daily from all parts of the world. If our readers will study the "Club Notes" on the next page they will fully realise what fine fun Meccano boys are having.

To join the Meccano Guild it is only necessary to apply to the Guild Secretary for an application form, to fill it in and return it to him. Each member is supplied with a badge and a Guild Certificate.

There are many privileges attached to Guild membership, and the Secretary will be glad to send you full particulars of them on application. The main privilege, however, is that when joining the Meccano Guild, you are associating yourself with more than a million other boys who are working and playing just in the same way as yourself. Any boy who joins the Guild can never feel lonely or friendless.

Guild Notes.

By the SECRETARY.

It is very gratifying to me to note the continued and increasing success of the Meccano Guild movement. My space for "Club Notes" is very limited, and I feel sure I could fill the whole issue of the *Meccano Magazine* with reports of the doings of successful Meccano Clubs throughout the country.

I am also pleased to note the extension of the activities of some of the Clubs. Exhibition Nights and Social Evenings are always successful: Ambulance Classes have been formed in some instances, half-an-hour of each meeting being devoted to them: Reading Nights have been introduced, and the exchange of books among members.

The second Winter Session is going merrily along, and all the Clubs are doing great work in providing Meccano boys with enjoyable and happy times.

So far as I can see there are no idle Meccano boys; they are all industrious, enthusiastic, full of fun, and the best fellows in the world: I am proud to be associated with them.

The Guild Recruiting Campaign has been a very great success, and large numbers of members are now the proud possessors of the beautiful Medallion which I was able to offer. The Gold and Silver Medallions were keenly competed for, and as I write, the work of collecting and recording the recruits secured by each contestant is proceeding. In a few days the Gold and Silver Medallions will be despatched, and I shall be able to announce the winners in the next issue of the *Meccano Magazine*.

In response to a very large number of requests, I propose continuing this Recruiting Campaign until December 31st, 1921, for the special benefit of those members who have only recently joined. For their guidance I may say that each member who secures three new recruits for the Guild is awarded a very handsome Medallion. Recruiting Forms may be had on application, and each member who secures a recruit should write his own name and address on the back of the form used.

I have been asked for a Membership Card suitable for distribution among Club members, in which a syllabus for the Winter Session could be printed, together with the Club rules. I consider this a very good idea, and should welcome any further suggestions from Club Leaders, Secretaries and others interested in Club work. It is too late to do anything this winter, but I propose issuing a suitable card for the 1921 Winter Session.

In the No. 14 issue of the Magazine, I announced that special Club prizes would be awarded for new models which were the combined work of the Club members. I have been gratified by the response to this and now have pleasure in announcing the results for the first Session.

The 1st Prize of £5 in cash has been awarded to the "Claygate Meccano Club" for a very fine model of a Floating Dock, which comprises Workshops, Messrooms and a Lighthouse.

The 2nd Prize of £3 in cash has been awarded to the "Holy Trinity Meccano Club" for a fine model Warehouse; Elevators, Travelling Crane, Motor Lorries, Offices, Bridge, etc., all complete and lighted by electricity.

Both models are very excellent, and Mr. Hornby found some difficulty in judging between them.

Amongst the other good entries was a Tram Depot submitted by the "New Malden Meccano Club," an Airship Mooring Mast, by the "Norwich Enterprise Meccano Club," a Recording Telegraph, by the "Meccanock Meccano Club," a Workshop by the "Leamington Meccano Club," an Aeroplane by the "King Street Meccano Club," and a fine Bridge by the "All Souls' Meccano Club" (Liverpool).

I would remind Club Leaders and Secretaries that this Competition will be continued during the second session, and further Cash Awards of £5 and £3 will be made to the Clubs which send in the best models. The closing date is May 15th, 1921.

In the No. 14 *Meccano Magazine*, I announced the awarding of special Medallions for meritorious Club work, and I have great pleasure in illustrating these herewith. During the first Winter Session, a number of Club members have competed for these Medallions, and the following awards have been made:—

LECTURES.

C. L. Bowyer, "St. Thomas (Exeter) Meccano Club."
W. Edge, "Small Heath Meccano Club."
J. Dickens, "Gedling Meccano Club."

CLUB WORK.

L. Palk, 64, Cowick Street, Exeter.
G. Hare, 36, Willes Road, Leamington.
J. H. Roberts, 170, Dryden Street, Liverpool.
E. A. Atkins, "Strawberry Cottages," 46, Mill Lane, Carshalton.

Each of these boys has served his Club well, and richly deserves the award. I am a little disappointed with the number of entries, and would very strongly urge on Club Leaders and Secretaries the desirability of encouraging and helping Club members to gain these Medallions. Each Club is allotted two Medallions, one for each Winter Session, and are given to boys who read the best papers at their Club meetings. These papers may be upon any subject of interest, "Engineering," "Electricity," "Woodwork," "Stamp Collecting," etc. Boys may get help from parents, Club Leaders, or any other responsible person, and their papers may be illustrated by Lantern Slides, Drawings, Models, or in any other way. When they have been read at the Club meetings, the papers should be sent along to me with any comments by the Secretary or Club Leader, and the adjudication will be made at the end of the session. The Medallions themselves are exceedingly beautiful and have been specially struck for the Guild by Messrs. Elkington & Co., Ltd., of Liverpool, and each one is engraved with the name of the recipient.

I propose extending the distribution of these Medallions to those members, who in the opinion of the Club Leader have done special service in any capacity to the Club to which they belong. I trust each Leader and Secretary will do all he can to assist members now competing for these special awards. The second distribution will take place at the end of the second Winter Session.

Our Correspondence Club is in a flourishing state and I am daily putting members in touch with other Meccano boys who desire to enter into friendly correspondence. I shall be glad to send full particulars and rules of the Guild Correspondence Club to any member interested.

I have received many hundreds of suggestions for a suitable motto for the Meccano Guild, and I am still open to receive further mottoes and suggestions from members. In an early issue I shall publish a list of the best mottoes submitted, and I propose that the final selection shall be decided by the vote of the whole of the members of the Guild.

Club Notes.

CARLISLE M.C.—There are many good things in store for members of this Club—A Club Magazine and a Playlet based on the Meccanoland booklet, being two features, full of excellent possibilities. The Club Secretary is to be congratulated on his progressive ideas. *Secretary:* Master W. McVitie, 13, Sheffield Street, Carlisle.

ALL SOULS M.C. (Liverpool).—The energetic Secretary, has held one successful Exhibition and a Concert. Tea to celebrate the Club's Anniversary is fixed for April 14th.—*Secretary:* Master J. H. Roberts, 170, Dryden Street, Liverpool.

CARDIFF Y.M.C.A. M.C.—A big Club Outfit is being got together, and as most of the preliminary work in founding the Club has now been completed, boys are in for jolly times.—*Secretary:* Mr. N. Craven-Whitehead, Central Y.M.C.A., Cardiff.

ELLERSLIE M.C.—Mr. E. Wiggett-Thompson reports excellent work done at Club meetings. Boys have had several interesting and instructive Lectures on "Aviation" (Club Leader), "Steam Threshing Machine" (J. P. T. Pimm), "Manufacture of Leather" (Chairman), "Pumping" (J. C. B. Thompson), "Electricity and Wireless Telegraphy" (Club Leader). Many fine models have been constructed throughout the session, and meetings thoroughly enjoyed.—*Leader:* Mr. E. W. Thompson, 2, Green Lane, Eltham, London, S.E.9.

CHURCH OF CHRIST (Oldham) M.C.—Mr. Lindsay, the Club Leader, himself an inventor, has started a very promising Club. Members are keen and enthusiastic and the Club work has already aroused the interest and support of parents and friends.—*Leader:* Mr. J. Lindsay, 24, Pitt Street East, Oldham.

DUDLEY M.C.—This Club has been in existence since September last year, but has only recently become affiliated. Mr. Lewis, the Club Leader, sees great possibilities in the Meccano Guild movement for the good of its members, and he is ably supported by the members generally.—*Secretary:* Master F. W. Whitehouse, 16, New Rowley Road, Dudley, Worcester.

CHELTENHAM GRAMMAR SCHOOL M.C.—The Headmaster has kindly granted boys the use of a room, and already several successful meetings have been held. Mr. L. V. Belcher, one of the Masters, is the Club Leader.—*Secretary:* Master N. Trafford, 3, Hambrook Terrace, Charlton Kings, Cheltenham.

JUNIOR ENGINEERS M.C.—Excellent work has been done during the past session and membership is steadily increasing. A model building competition is being held this session, six prizes from 5s. to 2s. 6d. offered, and judges are well-known Manchester engineers. From members' subscriptions and outside donations, a fund for the purchase of Club Parts, Motors, etc., is making good headway.—*Secretary:* Master T. Booth, 96, Birch Lane, Longsight, Manchester.

HILDENBOROUGH M.C.—In his report for last session, Mr. Burton shows himself an earnest Club Leader, with the welfare of the boys very much at heart. The older boys are encouraged to take a real interest in their Club, whilst everything is made as simple as possible for the younger ones. Mr. Burton attaches great importance to the value of Lectures, providing they are not too long and quite elementary, and on several occasions he has given a short talk (about 15 or 20 minutes) on Meccano Parts and their uses, illustrating the various mechanical principles in a practical manner. A very successful Exhibition of Models has already been made and at their own suggestion the boys are busy building "Meccano Town" with river, docks, railways, bridges, warehouses, etc., for the final Exhibition on April 4th.—*Secretary:* Master W. Bassett, Laburnum Cottage, Hildenborough, Kent.

GREAT YARMOUTH M.C.—Enthusiasm for the Club runs right through from the Club Leader to the youngest members, and the result is excellent work at meetings, and a rapidly increasing membership. The Club has set itself the task of becoming the biggest and strongest Club in the Guild, and although it was only affiliated in January, the membership now stands at 103.—*Leader and Secretary:* Mr. H. Linford, 81, Middle Market Road, Great Yarmouth.

LEAMINGTON M.C. (Extract from newspaper cutting)—"'It's enthusiasm that runs the show.' The words were uttered by Mr. F. W. Bull, Leader of the Meccano Club which for the past year has been established at the Urquhart Hall, and a visit which we paid to the Club last Friday evening furnished us with ample proof that Mr. Bull is right. Thirty boys are members of the Club, and by their regular attendance and keenness have acquired a quite surprising knowledge of mechanical and engineering principles. Hydraulic cranes, aeroplanes, and a structure which suggested an armoured car were some of the models which we saw last Friday, leaving no doubt in our minds as to the practical bent of the youngsters, most of whom devise their own designs. Being members of a Club, they enjoy the additional benefits of assistance and criticism from their comrades, and lectures by Mr. G. V. Bolton, Dr. Crowther, and the Club Leader have been arranged for their instruction during the next few Friday evenings. The summer will bring with it cycle rides, picnics, and visits to engineering works, which in their turn will provide plenty of material for next autumn. Lieut.-General Sir John Kier, the President of the Club, was a visitor to the Urquhart Hall last Friday, and he heartily congratulated Mr. F. W. Bull and the Club members on what he saw during his inspection."—*Secretary:* Master G. Hare, 36, Willes Road, Leamington.

NONNINGTON M.C.—Report for last session indicates enjoyable meetings. Besides model building, etc., games are played—draughts, chess, rings, and the like—and part of a meeting is sometimes devoted to lectures, stories or riddles. There is a very interesting programme for the present session.—*Secretary:* Master G. K. Leppard, Holt Street, Nonnington, near Dover.

NORWICH ENTERPRIZE M.C. is making good progress. Boys who joined the Savings Club have now got outfits, and the fine programme for the present session should be productive of useful work.—*Secretary:* Rev. A. B. Grosvenor, 118, Vincent Road, Norwich.

KING STREET (Luton) M.C.—Mr. Burgoyne reports a very satisfactory session. Two energetic members, Masters H. J. and A. O. Squires, gave a series of Lectures on the Automobile, which were greatly appreciated. Model Building and discussions on different models have occupied other meetings. Members are keen on electrical side of Meccano. Membership 31, is being increased by advertising in local papers. A fine Christmas Social ended the year 1920.—*Secretary:* Master W. Humby, 34, Adelaide Street, Luton, Beds.

NEW MALDEN M.C. (Extract from Newspaper Report).—"A Meccano Exhibition and Concert was held in Elm Road Boys' School, New Malden, on Tuesday evening, when working models made by the boys were exhibited in the two classrooms, and very creditable was the handiwork displayed. Ingenuity and attention to detail appeared to be the prominent features of the majority of the models, which varied from an aeroplane to a swinging derrick. In the course of a short address, Mr. W. J. Cole, the late headmaster, paid a deserving tribute to Mr. V. Hammond, a teacher of the School, and the enthusiastic Leader of the Club. At the time of the formation of the Club, no other of its kind existed in New Malden. The idea of having such an organisation originated among the boys themselves, and Mr. Hammond was asked if he would be Leader. Variety was lent to the Exhibition by a musical programme." *Secretary:* Master S. B. Evans, 22, Howard Road, New Malden, Surrey.

MIRFIELD (Doncaster) M.C. is making steady, useful progress. New members are joining and interesting meetings are held.—*Leader and Secretary:* Mr. H. Leng, Rod Triangle Boys Club, 10, Waterdale, Doncaster.

NORTHFIELD M.C., recently affiliated, has already held ten meetings at which model building has been the chief feature. Meetings, Monday evenings. Exhibition of Models will be held in March.—*Secretary:* Master Willets, "Elstree," Steel Road, Northfield.

ST. JOHN'S (OXFORD) M.C.—During the past session this Club has made splendid progress. Mr. Read, the Club Leader, now has two gentlemen who assist in the organisation and running of the Club. Mr. W. Bunce, takes an interest in the model building and gives suitable lectures, whilst a Scoutmaster gives half-hourly lectures each meeting on First Aid. This excellent feature of the Club work is very popular with the members.—*Leader and Secretary:* Mr. W. A. Read, 62, East Avenue, Oxford.

SPARKBROOK M.C.—Thanks to the leadership of Mr. D. Pipes, the Club is forging ahead and the last session has been thoroughly enjoyed by everyone. In addition to Model building, interesting lectures on "Electricity" and "How the Armistice was Received at the Front" were much appreciated. A discussion on "Football," a "Reading Night" (when each boy took a book which he exchanged for another belonging to another member), "Games" evenings and Concerts provide ample variety. The Club Magazine, "Nuts and Bolts," edited by Master W. A. Clements, is a very bright, up-to-date little publication, and well worth reading.—*Secretary:* Master F. Hubball, 71, Turner Street, Sparkbrook, Birmingham.

RUABON M.C.—Miss M. P. Bradley-Jones, the President of the Club, writes: "The Meccano Club recently formed here is progressing satisfactorily. The members are very enthusiastic and keen, and make good use of their time. They have a nice warm room and everything to make their evenings pleasant and happy. The Club bids fair to be a great asset to the parish."—*Leader and Secretary:* Mr. A. H. Squire, "Bryn End," Ruabon.

ST. MARY WITH ST. GABRIEL M.C. has made rapid progress under the enthusiastic leadership of Mr. G. Treves. Members have increased to such an extent that Mr. Treves has had to hold two meetings a week.—*Secretary:* Master H. Bullock, 213, Newington Butts, London, S.E.11.

ST. MARGARET'S (Liverpool) M.C.—Mr. Pearson has started the Club on very sound lines and the response from the boys promises well for the future.—*Leader:* Mr. V. A. Pearson, 126, Hill Street, Liverpool.

A Meccano Story Competition.

In one of the entries in our last Essay Competition a boy competitor has made the suggestion that we publish short stories, the Meccano hobby being the central idea in each one. He also suggests that many Meccano boys themselves would be able to write little stories of this kind, and this suggestion has interested us very much. We have proved over and over again in our Essay Competitions that Meccano boys can write intelligently and can express their ideas clearly, and that they possess vivid imaginations. We should like as many of our readers as possible to endeavour to write a little story round the Meccano hobby and send it in for this competition. It can either be a story of actual fact, a fairy story, a story dealing with engineering, or in fact, any kind of a story with Meccano as the main idea of interest in it.

Read the following conditions carefully before sending your entry in.

The story should be about 500 words in length.

The competition is open to all readers of the *Meccano Magazine.*

A Hornby Clockwork train outfit will be awarded for the best story, with other awards for stories showing special merit.

The closing date will be July 1st, and the result will be announced in the July-August issue of the *Magazine.*

Write on one side of the paper only. Give your name and address on the back of each sheet, and address the envelope "Meccano Limited, Story Competition, Binns Road, Liverpool."

From a New Zealand Meccano Boy.

Dear Mr. Editor,—I have decided to settle down to-night and tell you some of the news of our little world.

I am sure the Meccano Guild will be a great success as so many boys don't know what to do during their spare evenings. I enclose 7d. for badge, and 6d. for some Magazines. I might just as well have them though I am half the distance round the world from you.

I left school last March and went out rabbiting with Dad. I liked it all right, but when prices went down we came home. It's a hang of a rough life but its very healthy. One gets away out in the back block miles and miles away from nowhere, where the stores come once a week, and then on pack horses. Have you ever had your grocer forget to send you your milk or sugar for a whole week, when you have been out of it? I have. Have you ever had bread and poison carried together, and had to throw away the bread for fear some poison had got on it? I have. One week we had neither bread, milk nor sugar. You have no idea how rotten it is living on pure tea, meat and potatoes, unless you try it.

It's all in rabbiting though. As you don't go in for rabbiting in England, I might as well tell you what it's like. One gets up at 5 o'clock in the morning, goes round traps set the day before, takes out and skins rabbits till six, comes back to breakfast till 6.30, then collects traps and reset till two. Come home for dinner, and I may as well say if you are four or five miles from camp, its mighty late before dinner is ready. Then the skins are put on stretching wires and put in the sun to dry. At six one goes out round the traps and takes out all the silly rabbits that go in till about ten, then back home to bed.

You can disbelieve it if you like, but I'll bet I never was more than five minutes getting off to sleep. Sometimes we used to get up at 4.30 and have breakfast before we went out, but it was terribly early

When we came home I fooled around a bit at odd jobs till I got the offer of a job in the garage here. I have always had a turn for mechanics, and I did not let the offer slip. I started in the second week of last June, and in September my first boss sold out to a mechanic at Fairlee.

List of Newly Affiliated Clubs.

WEST MELTON M.C.
Leader—Mr. F. Riley, 6, Co-operative Street, West Melton.
Secretary—Master Jack Dickinson, 2, Clarence Street, West Melton.

MIRFIELD M.C.
Leader—Mr. H. Leng, 10, Waterdale, Doncaster.
Secretary—Master H. Marshall, 4, Exchange Street, Cemetery Road, Doncaster.

GREAT YARMOUTH M.C.
Leader—Mr. H. Linford, 81, Middle Market Road, Great Yarmouth.

RUABON M.C.,
President—Miss E. Bradley Jones, High Street, Ruabon.
Leader—Master Arthur H. Squire, Bryn End, Ruabon.

WESTERTON M.C.
Leader—Mr. F. H. Ireland, "Oakenhurst," Westerton, by Drumchapel, Glasgow.
Secretary—Master J. Ireland, "Oakenhurst," Westerton, by Drumchapel, Glasgow.

ST. MARY WITH ST. GABRIEL M.C.
Leader—Mr. G. Treves, 207, Newington Butts, London, S.E.11.
Secretary—Master T. L. Bullock, 213, Newington Butts, London, S.E.11.

BUTT LANE COUNCIL SCHOOL M.C.
Leader—Mr. A. J. Ray, 147, Congleton Road, Talke, Stoke-on-Trent.
Secretary—Master Thos. Lethbridge, Old Butt Lane, Talke, Stoke-on-Trent.

ST. MARGARET'S M.C.
Leader & Secretary—Mr. V. A. Pearson, 126, Hill Street, Liverpool.
Club Address—St. Margaret's Schools, Upper Hamptson Street, off Princes Road, Liverpool.

NORTHFIELD M.C.
Leader—Mr. Porritt, Forest Dene, Hawkesley Mill Lane, Northfield, Birmingham.
Secretary—W. Willetts, "Elstree," Steal Road, Northfield, Birmingham.

CHURCH OF CHRIST SUNDAY SCHOOL M.C.
Leader—Mr. James Lindsay, 24, Pitt Street East, Oldham.

ST. CEDDS M.C.
Leader—Mr. A. H. New, St. Cedds Garth, Becton Road, Canning Town, E.16.
Secretary—Master Freddie Dutton.

PONTYPOOL ROAD M.C.
Leader—Mr. W. B. Sale, "Springfield," Pontypool Road, Mon.
Secretary—Master Sale, "Springfield," Pontypool Road, Mon.

CHELTENHAM GRAMMAR SCHOOL M.C.
Leader—Mr. L. V. Belcher, 63, Leighton Road, Cheltenham.
Secretary—Master Norman Trafford, 3, Hambrook Terrace, Charlton Kings, Cheltenham.

DUDLEY M.C.
Leader—Mr. L. Lewis, 2, Thornley Street, Wolverhampton.
Secretary—Master F. W. Whitehouse, 16, New Rowley Road, Dudley.
Club Address—Wesleyan Church, Dixon's Green, Dudley.

The new bosses are regular decent coves. There are two of them, one the clerk, one the mechanic. There is one chauffeur and two apprentices, of which I am one. Both are bound until July, 1925, so we ought to know the job by then, oughtn't we? I can do everything in the overhauling line except magnetos, and they are not the most important by a long shot.

What do you think of the cost of living? Mighty hot, isn't it? Sugar here is 6½d. per lb., and until six months ago it was 2½d., but things are starting to drop. There is no sale whatever for wool, and sheep owners don't care a hang whether they shear or not. Potatoes, too, have no sale. Different ones round here are tipping last season's crop out on to the river bed.

We had such a stunner flood here a couple of months ago, and the river, always most obstinate, broke away and came down the main road. Probably got sick of the one place and went out visiting. It didn't see much though. P.P. is the slowest, quietest village I reckon there is in South Canterbury. It consists of 1,200 people. But we have a cricket club, 63 in it altogether. It's only been in existence three weeks, and last week we played the crack South Canterbury team. I need not tell you how we came off. Six of their men were in and each retired, the rest thought they would let us have another innings. In the first we got 49 runs, and in the second 32.

I don't think I'll bother you with any more just now.

I saw the Prince when he was here in Timaru. He is not a bad looking chap either; I bet he enjoyed himself, too.

Good-bye just now.

Pleasant Point,
S. Canterbury,
New Zealand.

I remain, yours sincerely.
(Mr.) SYDNEY GRAY.

INTERESTING PHOTOGRAPHS.

Master RALPH SHIRE, 25, Derwent Road, Anerley, S.E. 20, has been awarded 2/6 for sending us this photograph.

A prize of 2/6 is offered to any Meccano Boy sending an interesting photograph which is published in the *M.M.*

Experimental Arc-Light.

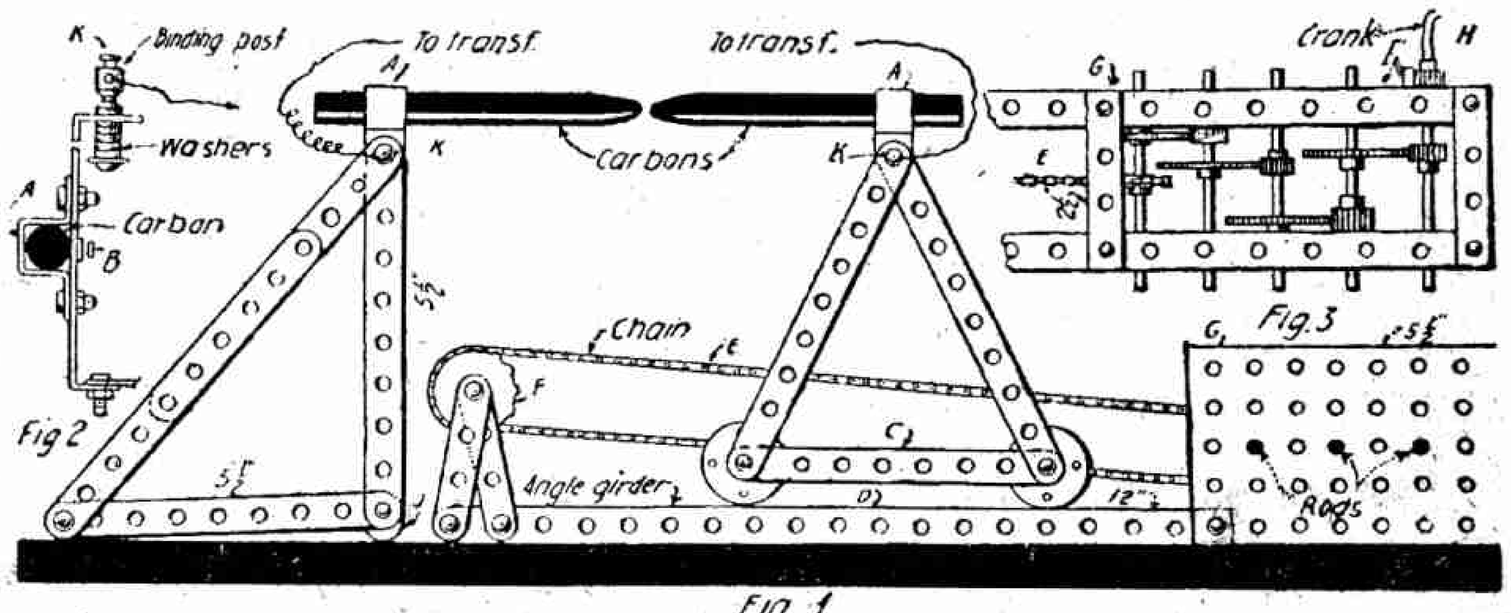


Fig 1

I herewith present a description and drawing of an experimental arc-light which I have constructed with my Meccano outfit. It is very simple and works nicely.

The carbons are held in place by double-bent strips (A) and nuts and bolts (B). The movable carbon is on a car or carriage (C) which runs on a track (D) 2½ inches wide and 12½ inches long. It is moved by chain (E) which passes over wheel (F) and back to gear box (G) and is moved by crank handle (H). By moving the handle the carbon is moved slowly and enables you to keep the light steady. On the crank-handle is a brake or pawl (I).

The drawing shows the gears clearly.

The stationary carbon is raised to the level of the movable carbon by angle-bracket (J). The wires are connected to the frames by binding posts (K) and are separated by space (L).

I have had good success with this light and run it on my toy transformer, at twenty-six volts. When finished I screwed it on a board. I am a subscriber to your magazine, which I like very much, and trust you will publish it in your magazine for the benefit of other interested electrical experimenters.

I will send you a photograph of my model as soon as I get it printed and developed.

Contributed by EDGAR KROEHLE.

Some Distance after Longfellow.

The shades of night were falling fast,
As through an English city passed
A youth who bore upon his breast,
A button, with this strange behest—
Meccano!

His brow was glad, his eye beneath
Flashed like a falchion from its sheath,
And ever as he sped along,
His voice broke out in joyful song—
Meccano!

In happy homes he saw the light
Of household fires gleam warm and bright,
But all these things he heeded not,
He must keep on until he'd got
Meccano!

"Run not so fast," the old man said,
"Young boys like you should be in bed,"
And thus to stop the youth he tried,
In vain, for still the voice replied:
Meccano!

"O stay!" the maiden said, "And rest
Thy weary head upon this breast."
The boy looked round as on he sped,
But this one word was all he said:
Meccano!

"Beware the traffic slow and fast!
Beware the motors rushing past!"
This was the policeman's warning word
Again the clarion voice was heard—
Meccano!

A tradesman just about to close
His shop, and take his sweet repose,
Beheld a youth with hurried stride,
Said he; "What now?" the boy replied:
Meccano!

His journey with success was crowned,
And soon in bed this youth was found.
When to his room his parents creep,
They hear him murmur in his sleep—
Meccano!

ALFRED CLITTY

A New Grand

Meccano Prize Competition

£250 in prizes

A new big Meccano Model Building Contest has started, and we want every Meccano boy to know all about it. There will be hundreds of prizes awarded, including nine prizes in cash to the value of £100, and Meccano Outfits to the value of not less than £150. This time the Competition will be divided into three sections.

1. For boys under 10 years of age.
2. For boys between 10 and 14 years of age.
3. For boys over 14 years of age.

In addition to these prizes the Meccano Guild is offering three awards of £5 each in cash to the member of the Guild who gains the best prize in his Section. Forms of entry may be obtained either from your dealer or from us.

There are no restrictions or entrance fees. Any Meccano boy can enter, and the competitor sending in a simple model made with a No. 0 stands just as good a chance of winning a prize as one sending in a complicated model made from a No. 6 Outfit. **This Competition will close on April 15th, 1921.**

Notes and News.

As a young man, Thomas Alva Edison, the great inventor, who is seventy-four years of age, worked on an average twenty hours a day for fifteen years. He commenced his business life as a newsboy on the Grand Trunk Railway, and was discharged from his job because he had set up an experimental chemical laboratory in a compartment of one of the company's trains. This was a serious matter for young Edison, because the irate conductor, who objected to the fumes of escaping sulphuric acid, gave the ardent scientist a box on the ear, which resulted in the deafness from which he has suffered ever since.

Edison states that one of the revolutions which he expects to see effected ere long is the substitution of nickel for paper in books and periodicals. He estimates that a sheet of nickel one-twenty-thousandth of an inch thick would be cheaper, tougher, and more flexible than an ordinary sheet of notepaper, and that a nickel book two inches thick would contain 40,000 pages, would weigh only one pound, and cost only a few shillings.

During 1920 1,325 aeroplanes have arrived in England from Europe bringing passengers and goods. Of these 1,097 were British, 236 French, 9 Belgian, and 1 Swiss. One can fly from London to Paris in less than 3 hours. By rail and steamer it takes all day to make the journey.

The longest railway tunnel through the Alps—the Simplon—is twelve and a half miles in length, but a tunnel nearly six miles longer than that has just been constructed in America to convey New York's water supply. It is 11ft. 6in. in height and 10ft. 3in. wide, and is egg-shaped in section, as is usual in sewers and other built-up underground water-conduits. A huge Venturi water-meter is to be installed at each end of the tunnel, and the normal flow is expected to be about 250,000,000 gallons a day.

George Stephenson, the man who invented the railway engine, had to encounter all kinds of ridicule when he was building his famous Rocket. Men of importance said that the engines would burst and blow the trains to pieces, and that they would set fire to the country side as they passed. They also said that the smoke would poison all the farm animals, pigs, cows and hens and that birds would drop dead, killed by the fumes. The "Rocket" won the prize of £500 offered to the man who made the best engine, and it drew a load of 13 tons at as high a speed as 29 miles an hour. A wonderful achievemen at that time.

Students of wireless telephony are aware of the fact that messages are sometimes carried for tremendous distances through what is known as a freak transmission—communication over an abnormal range for a given power of transmitter. The latest which has come to our notice is the case of two American amateurs of New Jersey who, while experimenting with a 100 watt installation, played a song of Harry Lauder's into the transmitter, after stating their names and addresses. Some time afterwards they were surprised by a letter from Aberdeenshire, in which the writer informed them that he had picked up their message, and had listened to the song. The distance was over 3,000 miles.

When Commander Peary discovered the North Pole in 1909, he planted a flag to denote the spot. Capt. Handsen, of the Amundsen Auxiliary Expedition, reports that the flag still floats proudly over the ice field in which it was erected but 400 miles away from its original position. The ice field has thus moved 400 miles since 1909.

Our Mail Bag.

The Editor has a little talk in this column with his Meccano boys. Whether he has space to reply to them all here or not, he is always glad to hear from them. He receives hundreds of letters each day and only those which deal with matters which are likely to interest other Meccano boys can be dealt with here

Correspondents will help the Editor if they will write on one side of the paper only.

E. H. Gorton, Murton.—"The *M.M.* is just the thing for Meccano boys, being a considerable help and inspiration to them. I shall make it known by every means in my power." Thanks for your tribute and help. We shall endeavour to live up to your good opinion.

Teddy Drew, Birmingham.—

"Distance lends enchantment,
Fear lends you wings.
Hours full of happiness
Good old Meccano brings."

The first two lines don't seem to have much bearing on the last two, but we know just what you mean Teddy, and we love you for all the nice things you say in your letter.

E. Edwards, Hull.—We are glad to hear of your son's Meccano doings. He is an earnest, enthusiastic boy, and we feel sure he will do well in life.

A. H. Savage, New Cross.—"I have put a notice up in my form room at school telling boys about the Meccano Guild, and many of them are joining. Tell other boys who are helping the Guild to try this plan." This is an excellent plan which we hope other Guild members will adopt. It could hardly fail to be successful.

H. D. Jennings, Sydenham.—

"Meccano is a beautiful toy,
And a good present for every boy.
Now those who've not got it, get it at once,
And if you don't—well I think you're a dunce."

Rather abrupt, but we quite understand your annoyance with non-Meccano boys. All editors are not stern hard men, Howard. This one is full of affection for the thousands of fine boys who write to him.

R. Croall, Leith.—"I hope the Sinn Feiners do not blow up the Meccano works, or kill Mr. Hornby, for the boys of all nationalities would suffer." Thanks for your kindly solicitude Robert, we trust no such calamity will happen.

J. B. Harris, Edinburgh.—"It would take Hercules and a couple of Meccano cranes to lift the wreath of laurels that should adorn Mr. Hornby's head." It would never do to honour Mr. Hornby in this way John. Just think of his plight whilst Hercules was preparing for the great lift.

Leslie Lovatt, Whitwell. "I am an underground pony driver in a coal mine, and I feel the happiest boy alive. I won a prize in your 1920-21 Competition, and I have a No. 6 Outfit. My father says I shall grow up to be a good man if I work hard at Meccano." You will help to make the world better some day Leslie, if we are any judge. We are proud to number you amongst our friends.

A. W. Russell, Wylde Green.—"We had a Hornby Train on Christmas Day, and it runs simply beautifully. It is the first clockwork motor I have seen which keeps its track." We have had hundreds of tributes to the excellence of these trains. The bigger models you ask for will be ready soon.

T. M. Edgington, Llanfair.—"I feel I can never be thankful enough to the person who gave my boy his first Meccano Outfit. It teaches many more things than mechanics, and is a distinct and very valuable education to any child. I regret that all children are not compulsorily educated in it." We read your letter with great pleasure, and we are very interested in hearing of your boy's aptitude for Meccano model building, and of his inventive talent. We hope to see more of his work in the big £250 Competition.

W. Malcomson, Belfast.—"I have to-day had delivered to me two Hornby Trains, and I wish to say that I have never seen such splendid goods at any price. They are just magnificent, and they knock all the Continental rubbish into a cocked hat. I feel so delighted with them because they are British made." We are glad to receive such an enthusiastic tribute. Passenger coaches, points and crossings are all well in hand in the Meccano factories and will shortly be ready.

H. S. Haslam.—"Do you know my friend, Ernest Boden? He has got a Meccano badge, and his sister has got the mumps." Ernest seems to have got the best of the bargain, doesn't he Hubert? We hope the badge will act as a charm to protect Ernest from the mumps and that his sister will soon be well again.

F. Foster Penge.—"I am the happy possessor of a No. 3 Outfit and a clockwork motor. I am always making something, and I feel quite an engineer. I used to find my spare time rather hard to fill up, but that difficulty has been got over, for I have no spare time with Meccano." Your letter shows us that you are a very industrious boy and the knowledge you are gaining now will certainly be very useful to you when you commence real engineering studies.

A. W. Earland, Mortlake.—"I suggest that you publish a sequel to the Meccanoland book dealing with Dick and his father's journey through the Meccano works. It would be interesting to hear about all the different things they saw there. I also suggest that you include a tame squirrel in the Meccano outfits to pick up the nuts." We have often had your first suggestion made to us, and we may bring out the book you want a little later. Dick and his father are very popular with Meccano boys. Your second suggestion is quite another matter. We certainly know of some parents who would be glad to see it adopted. Anyhow, there are not sufficient squirrels in the world to provide one for each outfit, so your suggestion will have to be dropped.

G. W. Latus, Hull.—If you will turn to another page in this issue you will see that we have started a column to deal with suggestions for new parts and new ideas of all kinds. Send yours along to me.

H. Underwood, Geneva.—"It may interest other Meccano boys to know that the rubber bands which are used on the Singer sewing machines can be used as tyres on 1" pulleys. They can be bought at any Singer store." A useful hint for other Meccano boys.

Meccano Manuals of Instructions.

There are two **Meccano** Manuals of Instructions, and no Meccano boy is properly equipped unless he has them both. Book No. 1 is the regular manual which goes with the main Meccano outfits. It contains illustrations and full instructions for making 323 fine models; some of the models have been designed by our own staff of experts, and others are prize-winning models contributed by Meccano boys, from every country in the world. Price 2s. 6d. (postage 3d. extra).

Meccano Manual, Book No. 2, has only recently been published, and it contains illustrations and instructions for building 100 entirely new models, very many of them prize winners. It contains Tanks, Guns, Submarines, Searchlights, and other warlike models; also a new series of simple and intensely-interesting scientific experiments which any boy can make and which impart a lot of useful knowledge. Price 1s. 3d. (postage 2½d. extra).

Prices of Meccano.

No.			
0	Outfit with full instructions for building		**6/-**
1	do.	do.	**10/-**
2	do.	do.	**20/-**
3	do	do.	**30/-**
4	do.	do.	**50/-**
5	do.	do. (Carton)	**70/-**
***5**	do.	do. (Wood)	**100/-**
***6**	do.	do. (,,)	**180/-**

*In well-finished cabinet with lock and key

Accessory Outfits.

No.						
0a	Converting a **No. 0**	into a **No.**	**1**	..		**5/-**
1a	do.	do.	**1**	do.	**2**	.. **11/-**
2a	do.	do.	**2**	do.	**3**	.. **12/-**
3a	do.	do.	**3**	do.	**4**	.. **22/-**
4a	do.	do.	**4**	do.	**5**	.. **17/6**
5a	do.	do.	**5**	do.	**6**	Car. **65/-**
5a	do.	do.	**5**	do	**6**	Wood **95/-**
Inventor's Outfit "A"				..	..	**10/-**
Inventor's Outfit "B"				..	..	**25/-**
Meccano Clockwork Motor				..	..	**12/6**

Each Meccano outfit is complete with all parts and tools necessary for building models. Full instructions are included, and the youngest boy can commence to build at once without study. An accessory outfit may be purchased at any time, enabling bigger and more interesting models to be built. Additional parts may also be purchased separately, at prices given in our published lists.

Remember that though boys play with Meccano for pleasure, and though they get more genuine fun from it than from any other toy, it also gives them a sound knowledge of engineering. Through playing with Meccano, many a bright boy has been started on a prosperous career in one of the most important and profitable professions—engineering and mechanics.

PUBLISHED BY MECCANO LTD.
BINNS ROAD, LIVERPOOL.
Printed by Taylor, Garnett, Evans, & Co., Liverpool, Manchester and London.